

## **II. REMARKS**

Claims 7, 8, 11, and 17 are amended to correct grammatical errors and for consistency among the claims. No new matter has been added.

The Examiner rejects claims 1 and 3-19 under 35 U.S.C. § 103(a) as allegedly being unpatentable over United States Patent No. 5,846,563 to Baichwal ("Baichwal") in view of United States Patent No. 2,895,880 to Rosenthal ("Rosenthal"). The Examiner also rejects claims 1 and 3-19 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Rosenthal in view of Baichwal. Applicants respectfully traverse.

The presently claimed invention is directed to a sustained release composition comprised of a core containing an active agent, one or more prolamins from about 30% to about 70% of the total weight of the composition and one or more gelling agents from about 5% to about 20% of the total weight of the composition, as recited in claim 1. Claims 3-8 and 18 are dependent upon claim 1. The prolamins are the hydrophobic portion of the composition and the gelling agents are the hydrophilic portion of the composition. The invention also relates to a delayed-onset composition comprised of a core and a coating. The coating is dry compressed and is comprised of one or more prolamins from about 30% to about 100% of the total weight of the coating and one or more gelling agents from about 0% to about 20% of the total weight of the coating, as recited in claim 9. Claims 10-17 and 19 are dependent upon claim 9.

Claims may be rejected for obviousness-type purposes under 35 U.S.C. §103 when "the differences between the subject matter [of the claim] sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. §103(a). Therefore, obviousness inquiries require determining whether the prior art suggests the claimed invention and whether that prior art would have indicated a reasonable expectation of success to one of ordinary skill in the art. *In re O'Farrell*, 853 F.2d 894, 902-903, 7 USPQ2d 1673, 1680-1681 (Fed. Cir. 1988). Furthermore, "the prior art must teach or suggest all of the claim limitations." MPEP §§2142, 2143, emphasis added.

The Examiner has the burden of establishing a prima facie case of obviousness by proving three elements: (1) a suggestion or motivation from the prior art to modify or combine the reference teachings; (2) a particular reference (or combined references) must suggest or teach all the limitations of the challenged claim; and (3) a reasonable expectation

of success must exist from the prior art. MPEP §§2142, 2143, citing *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991). Finally, care must be exercised not to use the applicant's disclosure to fill in the gaps of the prior art. *In re Vaeck*, 947 F.2d 488, 493, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991), citing *In re Dow Chemical Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1531 (Fed. Cir. 1988).

**A. Claims 1 and 3-19 Are Patentable Over Baichwal In View of Rosenthal**

The Examiner rejects claims 1 and 3-19 as being unpatentable over Baichwal in view of Rosenthal. (Office Action, p. 2). Applicants respectfully disagree.

Baichwal discloses a sustained release formulation for insoluble therapeutically active medicament. (Baichwal, col. 2, ll. 19-20). Specifically, Baichwal discloses a sustained release excipient comprising from about 10-99% by weight of a gelling agent, from about 1-20% by weight of a cationic cross-linking agent, and from about 0-89% by weight of an inert pharmaceutical diluent and adding to the excipient a desired amount of the medicament. (Baichwal, col. 3, ll. 1-5). As stated in the Office Action, Baichwal does not teach the exact range of gelling agents and prolamins of the Applicants' invention and does not teach every active agent, gelling agent, and prolamins of the Applicants' invention. (Office Action, p.3). Rosenthal teaches a sustained release formulation comprising an amount of prolamins from about 20 to about 45% by weight of the total composition. Thus, the Examiner alleges that the Applicants' invention is rendered obvious by Baichwal in view of Rosenthal.

The prior art must teach or suggest all the claim limitations. MPEP §2143. Both the suggestion and the expectation of success must be found in the prior art references, and not in applicant's disclosure. A mere "obvious to try" is not enough to establish a *prima facie* case of obviousness; there must be a reasonable expectation of success. *Amgen, Inc. v. Chugai Pharmaceutical Co. Ltd.*, 927 F.2d 1200 (Fed. Cir. 1991). The prior art must provide one of ordinary skill in the art with the motivation to make the modifications required to arrive at the claimed composition. *In re Lahu*, 747 F.2d 703 at 705 (Fed. Cir. 1984). Where the proposed combination of art does not arrive at the claimed composition, the mere fact that the prior art could be so modified does not render obvious the claimed compositions unless the prior art suggested the desirability of the modification. *In re Gordon*, 733 F.2d 900, at 902 (Fed. Cir. 1984). Care must be exercised not to use the Applicants' disclosure to fill in the gaps in the prior art. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991); *In re Grabiak*, 769 F.2d

729 (1985). If it is not shown that the prior art gives a reason or motivation to make the claimed compositions, then there is no *prima facie* case and the applicant should prevail. *In re Grabiak*, 769 F.2d 729 (Fed Cir 1985). Such an argument does not require the applicant to make a showing of new or unanticipated results. *Id.*

Baichwal discloses a sustained-release pharmaceutical formulation comprising from about 10% to about 99% by weight of a gelling agent, from about 1% to about 20 % by weight a cationic cross-linking agent, and about 0% to 89% by weight of an inert pharmaceutical diluent. (Baichwal, col. 3, ll. 1-5). Baichwal teaches an amount of a hydrophobic material, such as zein, may be added to the formulation in an amount from about 1% to about 20% by weight. (Baichwal, col. 6, ll. 11-35). Applicants' claim 1, upon which claims 3-8 and 18 depend, is directed to a sustained release composition comprising one or more active agents, prolamin in about 30% to about 70% total weight of the composition, and one or more gelling agents in about 5% to about 20% of the total weight of composition. Applicants' claim 9, upon which claims 10-17 and 19 depend, is directed to a delayed-onset composition comprising a core and a dry-compressed coating comprising excipients comprising one or more prolamins in an amount about 30% to about 100% of the total weight to the coating and one or more gelling agents in about 0% to about 20% of the total weight of the coating. Examiner alleges that in view of Rosenthal, which teaches a sustained release formulation comprising prolamin in about 20% to about 45% by weight of the total composition, it would have been obvious to one of ordinary skill to modify the teaching of Baichwal to arrive at the Applicants' invention. (Office Action, p. 3). Applicants respectfully disagree.

Baichwal discloses a sustained release formulation with an optional hydrophobic material, such as zein, in an amount from about 1% to about 20% by weight of composition. (Col. 6, lines 30-35). Baichwal teaches that a hydrophobic material is added to its sustained release formulation "to slow the hydration of the gums," but the amount of hydrophobic material must be in an amount that will slow the rate of release of the medicament "without disrupting the hydrophilic matrix formed upon exposure to an environmental fluid." (Col. 6, lines 26-33). Thus, one of ordinary skill in the art would not be motivated by Baichwal to combine Baichwal with Rosenthal, which teaches a sustained release composition comprising from about 20% to about 45% prolamin, since Baichwal teaches that amounts greater than 20% by weight of a hydrophobic material may disrupt the hydrophilic matrix of the Baichwal sustained release formulation. In addition, Baichwal

discloses that increased amounts of hydrophobic material disrupts the hydrophilic matrix of the sustained release formulation, therefore, even if one was to combine the teachings of Baichwal and Rosenthal, based on Baichwal, one of ordinary skill in the art would not expect to achieve a sustained release composition with high amounts of hydrophobic material since the hydrophilic matrix would be disrupted. Finally, as discussed above, Baichwal actually teaches away from a sustained release composition comprised of an excess of 20% of a hydrophobic material because an amount greater than 20% would disrupt the synergistic value of the gelling agent. (Col. 6, lines 26-35). Therefore, the Baichwal reference cannot provide any suggestion, teaching, or motivation to combine the cited references because Baichwal teaches away from a composition containing more than 20% of a hydrophobic material. Teaching away is "strong evidence of nonobviousness." *In re Hedges*, 783 F.2d 1038, 1041, 228 U.S.P.Q. 685, 687 (Fed. Cir. 1986).

Both the suggestion and the expectation of success must be found in the prior art references, and not in applicant's disclosure. A mere "obvious to try" is not enough to establish a *prima facie* case of obviousness; there must be a reasonable expectation of success. *Amgen, Inc. v. Chugai Pharmaceutical Co. Ltd.*, 927 F.2d 1200 (Fed. Cir. 1991). Absent the Applicants disclosure in their specification, one of ordinary skill in the art would not modify Baichwal by increasing the amount of hydrophobic material and expect success. Applicants respectfully note that the Examiner may not use Applicants' disclosures in hindsight to fill in the gaps of the references cited. "To draw on hindsight knowledge of the patented invention, when the prior art does not contain or suggest that knowledge, is to use the invention as a template for its own reconstruction -- an illogical and inappropriate process by which to determine patentability." *Sensonics, Inc. v. Aerosonic Corp.*, 81 F.3d 1566, 1570 (Fed. Cir. 1996). "Care must be taken to avoid hindsight reconstruction by using the patent in suit as a guide through the maze of prior art references in the right way so as to achieve the result of the claims in suit." *Grain Processing Corp. v. American Maize-Products Co.*, 840 F.2d 902, 907 (Fed Cir 1988).

Examiner states that "differences in concentration will not support the patentability of subject matter encompassed by prior art unless there is evidence indicating such concentration . . . is critical." Office Action, p. 3. Applicants respectfully note that Baichwal teaches that the amount of hydrophobic material must be in an amount that does not disrupt the hydrophilic matrix of its sustained release formulation and thus teaches that the concentration is critical. (Baichwal, col. 6, lines 26-33). Thus, the difference in

concentrations, as disclosed by Baichwal and the Applicants, are "critical" and therefore support patentability of Applicants' invention.

Applicants submit that the rejection of claims 1 and 3-19 over Baichwal in view of Rosenthal is overcome and respectfully request that rejection of claims 1 and 3-19 under 35 U.S.C. § 103(a) be withdrawn.

**B. Claims 1 and 3-19 Are Patentable Over Rosenthal In View of Baichwal Under 35 U.S.C. § 103(a)**

Examiner rejects claims 1 and 3-19 under 35 U.S.C. § 103(a) as unpatentable over Rosenthal in view of Baichwal. (Office Action, p. 4). Examiner states that Rosenthal teaches a sustained release composition comprising prolamins in an amount from about 20% to about 45%. (Office Action, p. 4). Examiner admits that Rosenthal does not teach sustained release compositions comprising gelling agents of the Applicants' invention. *Id.* Examiner states that Baichwal teaches a sustained release formulation comprising one or more heteropolysaccharides, a cross-linking agent, an active agent, and a hydrophobic material, such as zein. *Id.* Examiner alleges that at the time the Applicants' invention was made, it would have been obvious to a person of ordinary skill in the art to modify the sustained release formulation of Rosenthal by adding a gelling agent disclosed in Baichwal. (Office Action, p. 5).

Applicants respectfully note that a rejection under 35 U.S.C. § 103(a) for obviousness requires that the motivation to modify the teachings of a cited reference must be found in that reference. MPEP § 2142 and § 2143. As discussed above, Rosenthal recites a sustained release pharmaceutical product comprised of a medicament dispersed in a prolamin being about 20% to about 45% by weight of the product. (Col. 5, lines 19-25). Rosenthal also does not motivate one of skill in the art to combine its disclosure of a sustained release composition comprising from about 20% to about 45% by weight of prolamin with Baichwal which teaches that the amount of hydrophobic material, such as zein, a prolamin, should be limited, preferably to about 1% to about 20% by weight of the composition. As discussed above, Baichwal discloses a sustained release pharmaceutical formulation comprised of from about 10% to about 99% by weight of the gelling agent combined with no more than about 20% of hydrophobic material, in order to maintain the balance of the formulation. (Col. 6, lines 30-35). Therefore, one of ordinary skill in the art would not be motivated to combine the teachings of Rosenthal with the teachings of Baichwal to achieve the present invention.

Rosenthal does not disclose nor suggest the addition of a gelling agent to the sustained release pharmaceutical product. Furthermore, nowhere does Rosenthal disclose or suggest a sustained release pharmaceutical product comprised of an active agent, gelling agents from about 5% to about 20% of the total weight of the composition and a prolamin from about 30% to about 70% of the total weight of the composition. (Claim 1). In addition, no where does Rosenthal teach or suggest a delayed-onset composition comprised of a core and a coating, wherein the coating comprises one or more prolamins from about 30% to about 100% of the total weight of the coating and one or more gelling agents from about 0% to about 20% of the total weight of the coating. (Claim 9). Thus, one of ordinary skill in the art would not be motivated by Rosenthal to modify its teachings to achieve the Applicants' invention as required for a rejection for obviousness. *In re Lahu*, 747 F.2d 703, 705 (Fed. Cir. 1984).

Absent the Applicants' disclosure in their specification, one of ordinary skill in the art would not be motivated by Rosenthal to modify its disclosure by adding a gelling agent to the composition and thus, Applicants' present invention is non-obvious over Rosenthal in view of Baichwal. Applicants respectfully note that the Examiner may not use Applicants' disclosures in hindsight to reconstruct the cited references to achieve the Applicants' claims. *See Sensonics, Inc. v. Aerosonic Corp.*, 81 F.3d 1566, 1570 (Fed. Cir. 1996); *Grain Processing Corp. v. American Maize-Products Co.*, 840 F.2d 902, 907 (Fed Cir 1988). If it is not shown that the prior art gives a reason or motivation to make the claimed compositions, then there is no *prima facie* case and the applicant should prevail. *In re Grabiak*, 769 F.2d 29 (Fed. Cir. 1985).

For the above reasons, Applicants respectfully submit that the presently claimed invention is not obvious over Rosenthal in view of Baichwal. Accordingly, it is most respectfully requested that the rejections under 35 U.S.C. § 103(a) be withdrawn, and reconsideration and allowance of claims 1 and 3-19 are respectfully requested.

### III. CONCLUSION

Applicants believe that no fee is due in connection with this amendment (other than for the Petition for Extension of Time submitted separately herewith). However, should the Patent Office determine that a fee is due, please charge the required amount to Pennie & Edmonds, LLP Deposit Account No. 16-1150.

Applicants believe that each ground for rejection of the pending claims has been successfully overcome. Accordingly, Applicants respectfully request that the following rejections be withdrawn: (1) claims 1 and 3-19 as unpatentable over Baichwal in view of Rosenthal under 35 U.S.C. § 103(a) and (2) claims 1 and 3-19 as unpatentable over Rosenthal in view of Baichwal under 35 U.S.C. § 103(a).

Applicants submit that the entire application is now in condition for allowance, early notice of which would be appreciated. The Examiner is invited to telephone the undersigned should any issues remain.

Respectfully submitted,

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